# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/074,307 | 02/11/2002 | Shujin Zhang | CISCO-5795 | 8835 |

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| EXAMINER |
|---|
| ARANI, TAGHI T |

| ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/074,307 | ZHANG ET AL. |
| | Examiner | Art Unit | |
| | Taghi T. Arani | 2131 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _11 February 2002_.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-55_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-43,48,49 and 52-55_ is/are rejected.

7)☒ Claim(s) _44-47 and 50-51_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _3/29/2002_ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _Mrach 8, 2002_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

1.      Claims 1-55 have been examined and are pending.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.      Claims 1, 9, 10, 18, 19, 33, 34, 37, 48 and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 9, 10, 18, 19, 33, 34, 37, 48 and 52 recite "communicating via a network interface with a host, wherein the communicating comprises a transport of multi-protocol data packets over a point-to-point communications link between the host and the network interface". It is not clear whether the act of communicating is taking place "between the host and the network interface" or some other entity is communicating via a network interface with the host. That is, if the communication is between the host and the network interface as two end points, then who and/or what is communicating via a network interface with a host. For purpose of examining, the Examiner assumes that a host is communicating with a network interface using a transport of multi-protocol data packets over a point-to-point communications link between the host and the network interface.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3.      Claims 1-43, 48-49 and 52-55 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-39 of U.S. Patent No. 6,253,327. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

4.      Claims 1-39 and 48-49 of the instant application recite identical limitations as claims 1-39 of the US patent No. 6,253,327. The difference being that independent claims 1, 9, 10, 18, 19, 29, 33 and 48 of the instant application recite (see Claim Comparison Table below):

**communicating via a network interface with a host, wherein said communicating comprises** a transport of multi-protocol data packets over a point-to-point communication link **between the host and the network interface.**

Claims 1, 9, 10, 18, 19, 29, and 33 of the US patent No. 6,253,327 recite:

**causing a host to communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point communication link.

**communicating via a network interface with a host, wherein said communicating comprises** a transport of multi-protocol data packets over a point-to-point communication link **between the host and the network interface** is read to mean (as stated above under section 35

U.S.C. 112 rejection) **causing a host to communicate with a network interface using** a

transport of multi-protocol data packets over a point-to-point communication link.

The term "subscriber" recited in claims 1-39 of the patent is considered species of the

genus "host" recited in claims 1-53 of instant application. Subscriber species of the patent

anticipates the genus host recited in the instant application.

Therefore, Claims 1-39 and 48-49 of the instant application are not patentably distinct

from claims 1-39 of the USP 6,253,327.

5.      Claims 40-41 of the instant application recite identical limitations as claims 29-30 of the

US Patent No. 6,253,327. The difference being that claim 40 of the instant application recites "A

gateway".... "having access to a first domain and a second domain, "a multi protocol point-to-

point link device" and an authentication processor " while claim 29 of the patent recites "An

apparatus"......."having the capacity to create same-session open channel to a first domain and a

second domain", "means foe causing a subscriber's host to communicate with a network

interface using a transport of multi-protocol data packets over a point-to-point link", and "means

for authorizing said subscriber to access said first domain and said second". That is, the

Apparatus comprising the means recited in the patent performs identical functions as the gateway

of the patent  comprising a multi protocol point-to-point device and an authentication processor

for authorizing said subscriber (host) to access said first domain and said second domain based

upon login information obtained from said subscriber (host). The preamble of the patent reciting

"An apparatus" .... "having the capacity to create same-session open channels to a first domain

and a second domain" anticipates "A gateway" ...."having access to a first domain and a second

domain". Therefore, Claims 40-41 of the instant application are not patentably distinct from

claims 29-30 of the US Patent No. 6,253,327.

6.      Claims 42-43 of the instant application substantially recite limitations of claims 29-30 of

the US Patent No. 6,253,327. The difference being that claim 42 of the instant application recites

"An apparatus".... "having access to a first domain and a second domain, "a multi protocol

point-to-point link device", "a source address device in communication with the host for

negotiating a dynamic Internet Protocol address", and "an authentication processor " while claim

29 of the patent recite "An apparatus".......""having the capacity to create same-session open

channel to a first domain and a second domain", "means foe causing a subscriber's host to

communicate with a network interface using a transport of multi-protocol data packets over a

point-to-point link", "means for identifying a source address for a subscriber", and "means for

authorizing said subscriber to access said first domain and said second". That is, while the

Apparatus comprising the means recited in the patent and the apparatus comprising devices and

an authentication processor recited in the instant application are not identical, but the apparatus

of the instant application is an obvious variation of the patent apparatus and they are not

patentably distinct from each other.

Claims 52-55 of instant application recites a program storage device readable by

machine, tangibly embodying a program of instructions executable by the machine to perform

the method claims 19-20 and 26-27 which recite identical limitations as claims 19-20 and 26-27

of the US Patent No. 6,253,327.

A program storage device as claimed in application claim 52 has one and only one practical

application. This program storage device readable by machine, tangibly embodying a program of

instructions executable by the machine is useful only in that it operates a programmable

computer to perform a series of acts that constitutes steps of a method that is identical to the

already claimed method of patent method claim 19. Thus, whenever this program storage is used

as intended (the only practical use for the program storage device), the method prescribed by

patent method claim 19 will be performed. Therefore, when the application program storage

device of claim 52 is considered as a whole, including its only practical (useful) effect, the

method of the US patent claim 19 covers the effective subject matter that practically must flow

from the recited subject matter of the application program storage device of claim 52. Therefore,

claims 52-55 of the instant application and claims 19-20 and 26-27 of the US Patent No.

6,253,327 are not patentably distinct.

Therefore, claims 1-39 of the US Patent No. 6,253,327 and claims 1-43 and 48-49 and

52-55 of the instant applicant are not patentably distinct and claims 1-43, 48-49 and 52-55 of the

instant application are obvious over claims 1-39 of the US Patent No. 6,253,327.

## Claim-Comparison Table

| Claim NO. | Application No. 10/074307 | Claim No. | Patent US 6,253,327 |
|---|---|---|---|
| 1 | A method for single-step subscriber logon to a differentiated data communications network including a first domain and a second domain, said method comprising: **communicating via a network interface** | 1 | A method for single-step subscriber logon to a differentiated data communications network including a first domain and a second domain, said method comprising: **causing a host to communicate with a** |

| | with a host, wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point communication link between the host and the network interface; identifying a source address for [a] the host; and authorizing the host to access said first domain and said second domain based upon login information obtained from the host. | | network interface using a transport of multi-protocol data packets over a point-to-point communication link; identifying a source address for the host; and authorizing the host to access said first domain and said second domain based upon login information obtained from said subscriber. |
|---|---|---|---|
| 2 | The method of claim 1 further comprising: authenticating said subscriber based upon login information obtained from the host. | 2 | The method of claim 1 further comprising: authenticating said subscriber based upon login information obtained from said subscriber. |
| 3 | The method of claim 2 wherein said authenticating is accomplished using Link Control Protocol (LCP). | 3 | The method of claim 2 wherein said authenticating is accomplished using Link Control Protocol. |
| 4 | The method of claim 1 wherein said identifying is accomplished using Internet Protocol Control Protocol (IPCP). | 4 | The method of claim 1 wherein said identifying is accomplished using Internet Protocol Control Protocol (IPCP). |
| 5 | The method of claim 1 wherein said | 5 | The method of claim 1 wherein said |

|   | identifying further comprises:<br><br>assigning an Internet Protocol address to<br><br>**the host** from a pool of addresses located in<br><br>a memory. |   | identifying further comprises:<br><br>assigning an Internet Protocol address to<br><br>**said subscriber** from a pool of addresses<br><br>located in memory. |
|---|---|---|---|
| 6 | The method of claim 1 wherein said<br><br>identifying further comprises:<br><br>assigning an Internet Protocol address to<br><br>**the host** from an authentication reply packet<br><br>received from an authentication server. | 6 | The method of claim 1 wherein said<br><br>identifying further comprises:<br><br>assigning an Internet Protocol address to<br><br>**said subscriber** from an authentication<br><br>reply packet received from an<br><br>authentication server. |
| 7 | The method of claim 1 wherein said<br><br>communicating is accomplished using<br><br>Point-to-Point Protocol (PPP). | 7 | The method of claim 1 wherein said causing<br><br>is accomplished using Point-to-Point<br><br>Protocol (PPP). |
| 8 | The method of claim I wherein said<br><br>authorizing further comprises:<br><br>writing said login information into a<br><br>memory. | 8 | The method of claim 1 wherein said<br><br>authorizing further comprises:<br><br>writing said login information into a<br><br>memory. |
| 9 | A method for single-step subscriber logon to<br><br>a differentiated data communications<br><br>network including a first domain and a<br><br>second domain, said method comprising:<br><br>authenticating **in a network interface** a | 9 | A method for single-step subscriber logon<br><br>to a differentiated data communications<br><br>network including a first domain and a<br><br>second domain, said method comprising:<br><br>authenticating **a subscriber** based upon |

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|---|---|---|---|
| | host based upon login information obtained from the host;<br><br>**communicating via the network interface with the host, wherein said communicating comprises** a transport of multi-protocol data packets over a point-to-point link **existing between the host and the network interface;**<br><br>identifying a source address for **the host;**<br><br>writing said login information into a memory; and<br><br>authorizing **the host** to access said first domain and said second domain based upon said login information. | | login information obtained from **said subscriber;**<br><br>**causing the subscriber's host to communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point link;<br><br>identifying a source address for said **subscriber;**<br><br>writing said login information into a memory; and<br><br>authorizing **said subscriber** to access said first domain and said second domain based upon said login information obtained **from said subscriber.** |
| 10 | A method for single-step subscriber logon to a differentiated data communication network including same-session access capabilities to a first domain and a second domain, said method comprising:.<br><br>**communicating via a network interface with a host wherein said communicating** | 10 | A method for single-step subscriber logon to a differentiated data communication network including same-session access capabilities to a first domain and a second domain, said method comprising:<br><br>**causing the subscriber's host to** |

| | comprises a transport of multi-protocol data packets over a point-to-point. communication link **between the host and the network interface**;<br><br>identifying a source address for the host; and<br><br>authorizing **the host** to access said first domain and said second domain based upon login information obtained from **the host**. | | **communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point communication link;<br><br>identifying a source address **for a subscriber**; and<br><br>authorizing **said subscriber** to access said first domain and said second domain based upon login information obtained from **said subscriber**. |
|---|---|---|---|
| 11 | The method of claim 10 further comprising:<br>authenticating **the host** based upon login information obtained from **the host.** | 11 | The method of claim 10 further comprising:<br>authenticating **said subscriber** based upon login information obtained from **said subscriber.** |
| 12 | The method of claim 11 wherein said authenticating is accomplished using Link Control Protocol LCP . | 12 | The method of claim 11 wherein said authenticating is accomplished using Link Control Protocol. |
| 13 | The method of claim 10 wherein said identifying is accomplished using Internet Protocol Control Protocol (IPCP). | 13 | The method of claim 10 wherein said identifying is accomplished using Internet Protocol Control Protocol (IPCP). |
| 14 | The method of claim 10 wherein said | 14 | The method of claim 10 wherein said |

|    | identifying further comprises:<br><br>   assigning an Internet Protocol address to **the host** from a pool of addresses located in a memory. |    | identifying further comprises:<br><br>   assigning an Internet Protocol address to **said subscriber** from a pool of addresses located in a memory. |
|----|----|----|----|
| 15 | The method of claim 10 wherein said identifying further comprises:<br><br>   assigning an Internet Protocol address to **the host** from an authentication reply packet received from an authentication server. | 15 | The method of claim 10 wherein said identifying further comprises:<br><br>   assigning an Internet Protocol address to **said subscriber** from an authentication reply packet received from an authentication server. |
| 16 | The method of claim 10 wherein said **communicating** is accomplished using Point-to-Point Protocol (PPP). | 16 . | The method of claim 10 wherein said **causing** is accomplished using Point-to-Point Protocol (PPP). |
| 17 | The method of claim 10 wherein said authorizing further comprises:<br><br>   writing said login information into a memory. | 17 | The method of claim 10 wherein said authorizing further comprises:<br><br>   writing said login information into a memory. |
| 18 | A method for single-step subscriber logon to a differentiated data communication network including same-session access capabilities to a first domain and a second | 18 | A method for single-step subscriber logon to a differentiated data communication network including same-session access capabilities to a first domain and a second |

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|---|---|---|---|
| | domain, said method comprising:<br><br>authenticating **a host** based upon login information obtained from **the host**;<br><br>**communicating via a network interface with the host**, wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point link **existing between the host and the network interface**;<br><br>identifying a source address for **the host**;<br><br>writing said login information into a memory; and<br><br>authorizing **the host to** access said first domain and said second domain based upon said login information. | | domain, said method comprising:<br><br>authenticating **a subscriber** based upon login information obtained from **said subscriber**;<br><br>**causing the subscriber's host to communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point link;<br><br>identifying a source address for **said subscriber**;<br><br>writing said login information into a memory; and<br><br>authorizing **said subscriber** to access said first domain and said second domain based upon login information **obtained from said subscriber.** |
| 19 | A method for single-step subscriber logon of a host to a differentiated data communication network having access to a | 19 | A method for single-step subscriber logon of a host to a differentiated data communication network having access to a |

| | first domain and a second domain | | first domain and a second domain |
| | comprising: | | comprising: |
| | receiving login information from **said host**; | | receiving login information from **the subscriber**; |
| | authenticating **said host** based upon said login information; | | authenticating **said subscriber** based upon said login information; |
| | storing said login information in a memory; | | storing said login information in memory; |
| | notifying **said host** once a successful authentication process has been completed; | | notifying the **subscriber's host** once a successful authentication process has been completed; |
| | **initiating** an address allocation **negotiation** session; | | **setting** an address allocation session with **said host**; |
| | assigning a source address to said host; | | assigning a source address to said host; |
| | **communicating via a network interface with said host,** wherein said communicating comprises **a transport of** multi-protocol data packets over a point-to-point link **existing between said host and said network interface**; and | | **causing said host to communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point link; and |
| | writing a subscriber-related entry into the memory based upon said source address | | writing a subscriber-related entry into memory based upon said source address and |

| | and said login information. | | said login information. |
|---|---|---|---|
| 20 | The method of claim 19 wherein said authenticating further comprises:<br><br>processing an authentication request packet based upon said login information;<br><br>sending said authentication request packet to an authentication memory bank; and<br><br>receiving a reply packet from said authentication memory bank. | 20 | The method of claim 19 wherein said authenticating further comprises:<br><br>processing an authentication request packet based upon said login information;<br><br>sending said authentication request packet to an authentication memory bank; and<br><br>receiving **an access accept** reply packet from said authentication memory bank. |
| 21 | The method of claim 20 wherein said sending further comprises:<br><br>sending said authentication **request packet** via a Remote Access Dial-In User Service (RADIUS) protocol communication link. | 21 | The method of claim 20 wherein said sending further comprises:<br><br>sending said authentication **reply packet** via a Remote Access Dial-In User Service (RADIUS) protocol communication link. |
| 22 | The method of claim [19] 20 wherein said writing further comprises:<br><br>writing said subscriber-related entry into the memory based upon configuration information in said reply packet **from said** | 22 | The method of claim 19 wherein said writing further comprises:<br><br>writing said subscriber-related entry into a memory based upon configuration information in said **access accept** reply |

| | | | |
|---|---|---|---|
| | **authentication memory bank.** | | packet. |
| 23 | The method of claim 19 wherein said login information comprises a user name and a user authenticator. | 23 | The method of claim 19 wherein said subscriber login information includes the user name and user authenticator. |
| 24 | The method of claim 19 wherein said receiving further comprises:<br><br>receiving login information using a Link Central Protocol (LCP) communication link. | 24 | The method of claim 19 wherein said receiving further comprises:<br><br>receiving login information using a Link Central Protocol (LCP) communication link. |
| 25 | The method of claim 19 wherein said initiating further comprises:<br><br>**utilizing** an Internet Protocol Control Protocol (IPCP) communication link. | 25 | The method of claim 19 wherein said setting further comprises:<br><br>**setting an address allocation session using** an Internet Protocol Control Protocol (IPCP) communication link. |
| 26 | The method of claim 19 wherein said assigning further comprises:<br><br>retrieving a subscriber Internet Protocol address from a pool of addresses located in the memory. | 26 | The method of claim 19 wherein said assigning further comprises:<br><br>retrieving a subscriber Internet Protocol address from a pool of addresses located in memory. |
| 27 | The method of claim 19 wherein said assigning further comprises: | 27 | The method of claim 19 wherein said assigning further comprises: |

| | | | |
|---|---|---|---|
| | retrieving a subscriber Internet Protocol address from an access accept reply packet received from an authentication server. | | retrieving a subscriber Internet Protocol address from an access accept reply packet received from an authentication server. |
| 28 | The method of claim 19 wherein said communicating further comprises:  utilizing a Point-to-Point Protocol session between said host and said network interface. | 28 | The method of claim 19 wherein said causing further comprises:  causing said host to communicate with said network interface using a Point-to-Point Protocol session. |
| 29 | An apparatus for single step logon of a host to a differentiated data communication network having the capacity to create same-session open channels to a first domain and a second domain, the apparatus comprising:  means for communicating via a network interface with a host, wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point communication link existing between the host and the network interface;  means for identifying a source address for the host; and | 29 | An apparatus for single step logon of a host to a differentiated data communication network having the capacity to create same-session open channels to a first domain and a second domain, the apparatus comprising:  means for causing a subscriber's host to communicate with a network interface using a transport of multi-protocol data packets over a point-to-point link;  means for identifying a source address for a subscriber; and |

| | means for authorizing **the host** to access said first domain and said second domain based upon login information obtained from **the host**. | | means for authorizing **said subscriber** to access said first domain and said second domain based upon login information obtained from **said subscriber**. |
|---|---|---|---|
| 30 | The apparatus of claim 29 further comprising: <br><br> means for authenticating the host based upon login information obtained from **the host**. | 30 | The apparatus of claim 29 further comprising: <br><br> means for authenticating said subscriber based upon login information obtained from **said subscriber**. |
| 31 | The apparatus of claim 29 wherein said means for **communicating** further comprises: <br><br> means for communicating between the host and the network interface using a Point-to-Point Protocol session . | 31 | The apparatus of claim 29 wherein said means for **negotiating for the transport of multi-protocol data packets** further comprises: <br><br> means for communicating between said host and said network interface using a Point-to-Point Protocol session. |
| 32 | The apparatus of claim 29 wherein [a] said means for authorizing further comprises: | 32 | The apparatus of claim 29 wherein said means for authorizing said subscriber to access said first domain and said second domain further comprises: |

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| | means for writing said login information into a memory. | | means for writing said login information into a memory. |
| 33 | An apparatus for single-step subscriber logon of a host to a differentiated data communication network having access to a first domain and a second domain comprising:<br><br>    means for receiving login information from **said host**;<br><br>    means for authenticating **said host** based upon said login information;<br><br>    means for storing said login information in a memory;<br><br>    means for notifying said host once a successful  authentication process has been completed;<br><br>    means for initiating an address allocation negotiation  session;<br><br>    means for assigning a source address to said host; | 33 | An apparatus for single-step subscriber logon of a host to a differentiated data communication network having access to a first domain and a second domain comprising:<br><br>    means for receiving login information from **the subscriber**;<br><br>    means for authenticating **said subscriber** based upon said login information;<br><br>    means for storing said login information in a memory;<br><br>    means for notifying the subscriber's host once a successful authentication process has been completed;<br><br>    means for setting an address allocation session with said host;<br><br>    means for assigning a source address to said host; |

| | means for communicating via a network interface with said host wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point link **existing between said host and said network interface**; and<br><br>means for writing a subscriber-related entry into the memory based upon said source address and said login information. | | means for causing said host to communicate with a network interface **using** a transport of multi-protocol data packets over a point-to-point link; and<br><br>means for writing a subscriber-related entry into memory based upon said source address and said login information. |
|---|---|---|---|
| 34 | A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for single-step subscriber logon to a differentiated data communications network including a first domain and a second domain, said method comprising:<br><br>**communicating via a network interface with a host,** wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point communication link **between the host** | 34 | A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for single-step subscriber logon to a differentiated data communications network including a first domain and a second domain, said method comprising:<br><br>**causing the host to communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point communication link; |

| | and the network interface; | | |
|---|---|---|---|
| | identifying a source address for **the host**; and | | identifying a source address for a host; and |
| | authorizing the host to access said first domain and said second domain based upon login information obtained from **the host**. | | authorizing said host to access said first domain and said second domain based upon login information obtained from **said subscriber**. |
| 35 | The program storage device of claim 34 wherein said method further comprises:<br><br>authenticating **the host** based upon login information obtained from **the host**. | 35 | The program storage device of claim 34 wherein said method further comprises:<br><br>authenticating **said subscriber** based upon login information obtained from **said subscriber**. |
| 36 | The program storage device of claim 34 wherein said authorizing further comprises:<br><br>writing said login information into a memory. | 36 | The program storage device of claim 34 wherein said authorizing further comprises:<br>writing said login information into a memory. |
| 37 | A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for single-step | 37 | A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for single-step subscriber |

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| | subscriber logon to a differentiated data communication network including secure simultaneous access capabilities to a first domain and a second domain, said method comprising:<br><br>**communicating via a network interface with a host wherein said communicating comprises** a transport of multi-protocol data packets over a point-to-point communication link **between the host and the network interface;**<br><br>identifying a source address for **the host;** and<br><br>authorizing the host to access said first domain and said second domain based upon login information obtained from **the host.** | | logon to a differentiated data communication network including secure simultaneous access capabilities to a first domain and a second domain, said method comprising:<br><br>**causing the subscriber's host to communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point communication link;<br><br>identifying a source address for a subscriber; and<br><br>authorizing said subscriber to access said first domain and said second domain based upon login information obtained from **said subscriber.** |
| 38 | The program storage device of claim 37 wherein said method further comprises:<br><br>authenticating **the host** based upon login information obtained from **the host.** | 38 | The program storage device of claim 37 wherein said method further comprises:<br><br>authenticating **said subscriber** based upon login information obtained from **said subscriber** |

| 39 | The program storage device of claim 37 wherein said method further comprises: writing said login information into a memory. | 39 | The program storage device of claim 37 wherein said method further comprises: writing said login information into a memory. |
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| 40 | **A gateway** for single-step subscriber logon of a host to a differentiated data communication **network having access** to a first domain and a second domain, **the gateway** comprising: a multi-protocol point-to-point link **device** for establishing a communication link for the transport of multi-protocol data packets between the host and the **gateway**; a source address **device** for obtaining a source address for **the host**; and **an authentication processor** for authorizing the host to access the first domain and the second domain based upon login information obtained from **the host**. | 29 | **An apparatus** for single step logon of a host to a differentiated data communication network **having the capacity to create same-session open channels** to a first domain and a second domain, **the apparatus** comprising: **means** for causing a subscriber's host to communicate with a **network interface** using a transport of multi-protocol data packets over a point-to-point link; **means** for identifying a source address for **a subscriber**; and **means for** authorizing said subscriber to access said first domain and said second domain based upon login information obtained from **said subscriber**. |
| 41 | The gateway as defined in claim 40, | 30 | The apparatus of claim 29 further comprising: |

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| | wherein the authentication processor authenticates the host based upon the login information. | | means for authenticating said subscriber based upon login information obtained from said subscriber. |
| 42 | An apparatus for single-step subscriber logon of a host to a differentiated data communication network **having access** to a first domain and a second domain, the apparatus comprising:<br><br>a multi-protocol point-to-point link device in communication with the host for establishing a communication link;<br><br>**a source address device in communication with the host for negotiating a dynamic Internet Protocol address; and**<br><br>**an authentication processor for** authorizing the host to access the first domain and the second domain based upon loin information obtained from the host. | 29 | An apparatus for single step logon of a host to a differentiated data communication network **having the capacity to create same-session open channels** to a first domain and a second domain, **the apparatus** comprising:<br><br>**means** for causing a subscriber's host to communicate with a **network interface** using a transport of multi-protocol data packets over a point-to-point link;<br><br>**means for identifying a source address for a subscriber; and**<br><br>**means for** authorizing said subscriber to access said first domain and said second domain based upon login information obtained from **said subscriber.** |
| 43 | The apparatus as defined in claim 42, | 30 | The apparatus of claim 29 further |

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| | wherein the authentication processor receives the login information from the host and authenticates the host. | | comprising:<br><br>means for authenticating said subscriber based upon login information obtained from said subscriber. |
| 48 | An apparatus for single-step subscriber logon to a differentiated data communications network including a first domain and a second domain, the apparatus comprising:<br><br>means for communicating via a network interface with a host, wherein the communicating comprises a transport of multi-protocol data packets over a point-to-point communication link between the host and the network interface;<br><br>means for identifying a source address for the host; and<br><br>means for authorizing the host to access the first domain and the second domain based upon login information obtained from the host. | 29 | An apparatus for single step logon of a host to a differentiated data communication network having the capacity to create same-session open channels to a first domain and a second domain, the apparatus comprising:<br><br>means for causing a subscriber's host to communicate with a network interface using a transport of multi-protocol data packets over a point-to-point link;<br><br>means for identifying a source address for a subscriber; and<br><br>means for authorizing said subscriber to access said first domain and said second domain based upon login information obtained from said subscriber. |

| 49 | The apparatus as defined in claim 48, further comprising: means for authenticating the host based upon login information obtained from **the host.** | 30 | The apparatus of claim 29 further comprising: means for authenticating said subscriber based upon login information obtained from **said subscriber**. |
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| 52 | **A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform** a method for single-step subscriber logon of a host to a differentiated data communication network having access to a first domain and a second domain, the method comprising: receiving login information from the host; authenticating the host based upon the login information; storing the login information in a memory; notifying the host once a successful authentication process has been completed; **initiating** an address allocation | 19 | A method for single-step subscriber logon of a host to a differentiated data communication network having access to a first domain and a second domain comprising: receiving login information from **the subscriber**; authenticating **said subscriber** based upon said login information; storing said login information in memory; notifying the subscriber's host once a successful authentication process has been completed; **setting** an address allocation session with |

| | negotiation session; | | said host; |
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| | assigning a source address to the host; | | assigning a source address to said host; |
| | **communicating via a network interface with the host, wherein the communicating comprises** a transport of multi-protocol data packets over a point-to-point link existing between the host and the network interface; and | | **causing said host to communicate with a network interface using** a transport of multi-protocol data packets over a point-to-point link; and |
| | writing a subscriber-related entry into the memory based upon the source address and the login information. | | writing a subscriber-related entry into memory based upon said source address and said login information. |
| 53 | The program storage device as defined in claim 52, wherein the authenticating further comprises:, processing an authentication request packet based upon the login information; sending the authentication request packet to an authentication memory bank; and receiving a reply packet from the authentication memory bank. | 20 | The method of claim 19, wherein said authenticating further comprises: processing an authentication request packet based upon said login information; sending said authentication request packet to an authentication memory bank; and receiving **an access accept** reply packet from said authentication memory bank. |
| 54 | The program storage device as defined in | 26 | The method of claim 19, wherein said |

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| | claim 52, wherein the assigning further comprises: retrieving a subscriber Internet Protocol address from a pool of addresses located in the memory. | | assigning further comprises: retrieving a subscriber Internet Protocol address from a pool of addresses located in memory. |
| 55 | The program storage device as defined in claim 52, wherein the assigning further comprises: retrieving a subscriber Internet Protocol address from an access accept reply packet received from an authentication server. | 27 | The method of claim 19 wherein said assigning further comprises: retrieving a subscriber Internet Protocol address from an access accept reply packet received from an authentication server. |

## *Allowable Subject Matter*

7.      Claims 44-47 and 50-51 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## Conclusion

8.      Prior arts made of record, not relied upon:

US Patent No. 5,241,594 to Kung.

US Patent No. 5,684,950 to Dare et al.

US Patent 5,944,824 to He.

US Patent No. 6,041,054 to Westberg.
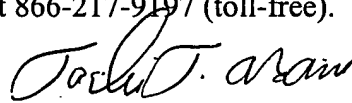
US Patent No. 6,119,160 to Zhang et al.

US Patent No. 6,26,296 to Lindsey et al.

US Patent No. 6,317,838 to Baize

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taghi T. Arani whose telephone number is (571) 272-3787. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Taghi T. Arani, Ph.D.
Examiner
Art Unit 2131
7/21/2005